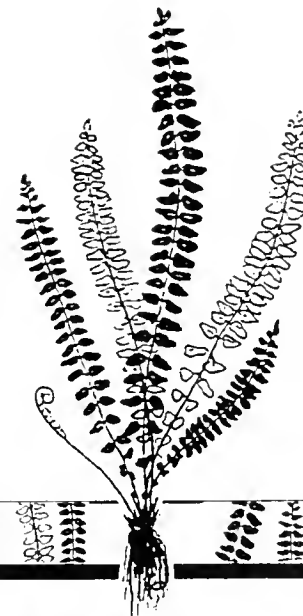


# Hardy Fern Foundation NEWSLETTER



## President's Message

Sue Olsen

Spring has arrived in the Pacific Northwest. The flowers are blooming and ferns unfurling, but we haven't forgotten the ravaging winter storms that swept through the area in late December. The following quote from the Rhododendron Species Foundation newsletter by their director Richard Piacentini describes the conditions at the garden:

"An arctic blast in late December caused some damage to the garden. On three nights, temperatures plummeted to 4° F and the ground was frozen to 6 inches for over a week. This is very unusual for the Pacific Northwest. In a normal winter we will probably only see the temperature in the mid-teens on one or two occasions and if the ground freezes overnight it is often thawed by mid-day the next day. It is too early to fully assess the damage, but leaf drop and browning of the leaves is evident in about 80 species. We expect most of these to recover fully and in spite of this, expect a good blooming season for our visitors.

This freeze points out the difficulty in trying to award hardiness ratings to plants. Five years ago the temperature also dropped to 4° F at the RSF. Even though the temperature was 4° for only one night compared to three nights this time there was significantly more damage five years ago. The primary reason for this is that the freeze occurred suddenly in November before there were any hard frosts to harden-off the plants. When we try to estimate hardiness for plants it is nothing more than an estimate because there are so many different factors involved in whether a plant will or will not survive, such as exposure to wind and sun, duration of the freeze, age of plant, snow cover, etc. So we try to be conservative with our estimates recognizing that any severe and unusual situation may be enough to tip the balance towards damage."

These same considerations also apply to the fern collection. We were fortunate in



Lakewold - The home of Mrs. Corydon Wagner and HFF public display garden.

that there was a 4" blanket of snow to modify the extremes of wind and temperature. A superficial inspection of the plants in early March indicates that we may be pleasantly surprised at the survival rate. A complete analysis will be published in our next newsletter.

I am pleased to report that the spore exchange was well received. We should like to encourage members to contribute to the exchange as well. The "How To" article on page 3 is for the beginner as well as the pro. Remember the common fern in your area may be on the "desirata" list for someone from afar.

We are also offering a few plants for sale this spring. (see attached notice) Next year we will feature a more comprehensive selection. In addition, while the supply lasts, we shall have ferns for sale at the gift shop at Lakewold. The proceeds will benefit both Lakewold and the HFF.

Our growers have been busy and we shall be adding to our introductory plantings this spring. Before the year's end we look forward to expanding into satellite sites. Be sure to visit when you are in the area.

We have nearly 300 members now with considerable interest having been gener-

ated by recent articles on Hardy Fern Foundation goals and activities in Horticulture Magazine, Fine Gardening and Garden. We thank them for their support. Your new membership roster includes all of those who have joined through March 1991. Renewal notices will be going out shortly as the membership year closes on June 30. Members who joined after September 1991 will find their renewals pro-rated to reflect this difference, and those joining from March 1991 through June will have a bonus membership valid through June of 1992. We thank you for your continued interest.

Our annual meeting will be held at 6:45 PM, May 30, in conjunction with the Northwest Horticultural Society's Fern Festival at the Center for Urban Horticulture, 3501 NE 41st St., Seattle. The meeting precedes the lecture by Hardy Fern Foundation member Paul Martin Brown on "Our Ferns in Their Haunts". I promise that the meeting will be brief so we can enjoy the ferns and an exciting lecture. Do come.... and bring along a new member. ■

## In Memoriam

It is with great sadness that we note the passing of two very special people. Our Honorary Board Member, Mrs. Corydon Wagner died at her home on April 9. All who have visited or seen featured in such works as The American Woman's Garden know that Eulalie Wagner created one of the world's most beautiful gardens at her beloved estate, Lakewold. Together with her late husband, Corydon, she imported an outstanding collection of special plants ranging from tiny alpine to exotic trees. She graciously and enthusiastically shared her knowledge with the garden's many visitors and was always interested in learning as well as teaching. She was an inspiration to us all and will be dearly missed.

Joseph Beitel, a founding member of the Hardy Fern Foundation and one of our original scientific advisors died of brain cancer on February 22. A graduate of Cornell University and PhD candidate at the University of Michigan, Joe was the New York Botanical Garden's horticultural taxonomist and a world authority on North American clubmosses. Joe was a teacher, an author, and above all an enthusiastic and caring human being. We will all miss him.

## Thank You!

The Hardy Fern Foundation wishes to sincerely thank the following members who have contributed above and beyond the basic membership classifications. Your support sustains our existence.

### Contributing:

Martha Robbins

### Endowment:

Mrs. Joseph Carman III

Dr. Gerald Hudgens

Dr. Irving Knobloch

### In Memory of Joseph Beitel

Dr. Joan Gottlieb

## Fern Cultivation in Northern Utah, Part 2

By James R. Horrocks

**CYSTOPTERIS** - Both *C. fragilis* and *C. bulbiferum* are native to Utah and they are quite at home in my garden. In fact, *C. bulbiferum* has become almost a weed. Curiously, it seems rather rare in the mountains here. I have never encountered it in the wild. *C. fragilis* is rather common, though.

**DENNSTAEDTIA** - I have tried two species here. Strangely enough, I had a miserable time with *D. punctilobula*, which proved difficult to establish and unable to adapt. After three failed attempts I gave up. *D. Wilfordii*, with its curious narrow fronds failed as well.

**DIPLAZIUM okudairae** - Made it through one winter but subsequently perished, seemingly needing more humidity than I could muster.

**DOODIA media** - survived one cold winter but eventually died out.

**DRYOPTERIS affinis** - has grown well in my garden for several years.

*D. arguta* - I grew this fern for a few years but eventually lost it, possibly because the soil was not acid enough.

*D. atrata* (or *cycadina*) as some insist is a strong grower here. I have many fine plants since it is quite easy from spores and seems to transplant well.

*D. championii* - This fern looked promising but both attempts to grow it failed. I'm not sure why.

*D. clintoniana* - I grew this for several years but it gradually disappeared. I believe it needed more acidity than I could give it.

*D. crassirhizoma* - Another species that looked promising but would never "take off". It eventually succumbed.

*D. cristata* - Attempted but short-lived. This fern needs lots of water and acidity.

*D. dilatata* - Grown for several years but lost it one winter and have not tried it again.

*D. erythrosora* - This beautiful fern has been a disappointment here. I have tried it a half dozen times but it seems to require high humidity since the only place I can get it to grow is in a terrarium. Local nurseries sell it but I doubt anyone has had much success outdoors.

*D. filix-mas* - This is the only species of *Dryopteris* native to Utah. It is a good garden subject and very easy. I am also growing several variants with good success:

*D. fm Barnesii*

*D. fm grandiceps*

*D. fm linearis*

*D. fm undulata robusta* - A strong grower and a big success here. It may be a hybrid cross between *D. filix-mas* and *D. affinis*.

*D. Goldiana* - I have grown this fern for years in soil rich in leafmold. It reaches perhaps 2-1/2 feet high here but never attains the magnificent proportions reported from more humid locales.

*D. hondoensis* - A *D. erythrosora* type, was equally disappointing and eventually died out.

*D. intermedia* - Quite easy to grow here with its finely cut fronds.

*D. lacera* - One of the easiest *Dryopteris* ferns I have ever encountered.

*D. marginalis* - Also easy to grow. This fern and *D. lacera* have several similarities in habit of growth but otherwise are distinct from each other.

*D. remota* - Has done fairly well here but never gets very large.

*D. Sieboldii* - This species is winter hardy here but it seems to need ample humidity. I grew one specimen in a large cold frame. Slugs and snails seem to pick on this species.

*D. tokyoensis* - Attempted twice with disappointing results. It seemed very difficult to establish.

*D. uniformis* - I have grown this species for years and found it a good strong grower. It seems happier growing next to rocks.

*D. varia* - Attempted but not very hardy here.

*D. wallichiana* - Both tries with this striking species failed. It did make it through one winter but eventually dwindled and perished. The lower humidity may have been a factor.

**GYMNOCARPIUM dryopteris** - Grew fairly well but gradually died out. This one is better with an acid soil and high humidity.

*G. Robertianum* - I had high hopes for this lime lover but the slugs wouldn't leave it alone and it soon died out.

*HYPOLEPIS punctata* - This species has lived under a wooden deck by the foundation of my home for several years, spreading slowly.

*LUNATHYRIUM thelypteroides* - I had a small clump of this for several years but it gradually disappeared. I would like to try it again, though.

*LYGODIUM japonicum* - Grew fairly well the first year I had it but succumbed the first winter even though it was planted against the foundation of my home and given ample protection.

*MATTEUCCIA struthiopteris* - Is there anyplace this fern will not grow? Very popular here as elsewhere. It does reflect its care, growing quite large if given enough water and a slightly acid soil.

*ONOCLEA sensibilis* - Did not do very well here and soon perished. Mainly an acid-loving swamp fern.


*ONYCHIDIUM japonicum* - An interesting little fern with carrot top foliage. It did

not flourish here and quickly died out. Needs lots of humidity.

*OSMUNDA* - I have grown *O. regalis*, *O. cinnamomea*, and *O. Claytoniana* but these acid lovers eventually weaken and die out. I would like to try *O. Claytoniana* once again.

*PELLAEA atropurpurea* - The only species that has done well in the garden here.

*P. brewerii* - Attempted but failed. It is native to the alpine recesses of Utah and should be allowed to remain there.

*P. rotundifolia* - Was not particularly hardy outside. 

More to come! Look for part three in our next newsletter

## Indoor Ferns

The spores of tender indoor ferns are available almost all the year round, although during the short days of winter fewer fronds are produced. Nevertheless, the technique for collecting hardy fern spores applies equally to indoor ferns.


## Cleaning Spores

I do not consider it essential that spores are separated from other sporangial debris but there is always the possibility a contaminant may be introduced and cleanliness is going to increase the chances of a successful spore sowing. To clean the spores brush (I always use an artist's natural bristle paint brush) them onto a sheet of any non-shiny paper. Slowly tip the paper on edge and tap it gently, the heavier sporangial debris will fall off the paper while the much smaller fern spore will adhere to it. A small quantity of spore may be lost but what is left will be more than adequate for most needs. Next, carefully fold the paper in two and tap gently, this traps the spores along the crease and they can be brushed onto a crock saucer. (Not plastic as any static electricity present will render the spores uncontrollable.) To sow them, gently brush a small quantity onto the surface of the compost.

## The Longevity of Fern Spores

The longevity of fern spores is often discussed between growers and involves much speculation rather than hard fact; certainly, green spore from such genera as *Osmunda* and *Ophioglossum* have a very short life, perhaps a matter of only a few days. However, I often supply spores of *Osmunda* to various parts of the world by airmail post and have never received any complaints concerning lack of germination. The spores of other genera may remain viable for weeks or perhaps even months. I recommend that we ignore all this and obtain spores as fresh as possible and sow immediately.

## Storing Spores

I have one recommendation on this - DON'T! Fern spores are much better off on the surface of the compost rather than languishing in an envelope. Of course, spore from the Society's Spore Exchange have to be stored and because of this the Society cannot guarantee the viability of the spores that are freely given. (But most grow - Ed.) 

AS ANY PROPAGATOR KNOWS, there is nothing more frustrating than to open a promising packet of spore only to have it be a packet of chaff. The following article from the *Pteridologist* by A. R. Busby, Honorary General Secretary of The British Pteridological Society should help solve the problem. It is reprinted with permission from The British Pteridological Society.

## Collecting Fern Spores

A. R. Busby

16 Kirby Corner Road, Canley,  
Coventry

Collecting fern spores is a relatively straight forward task as long as a few simple rules are followed. Normal species usually provide normal spores which, when grown on a suitable compost and given a little warmth and light, will germinate readily. Most hybrids produce abortive spores which will not germinate. Hybrid spores are easily recognised, if they are examined at around 100x magnification they will appear white and somewhat wizened. Healthy spores have a uniform shape, often round or similar to the segments of an orange. They will vary in colour according to species: i.e. yellow, black, brown or green.

## Spores of Garden Ferns

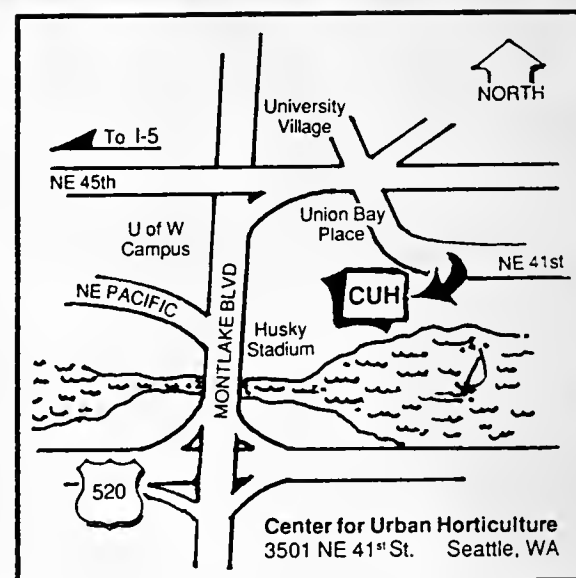
Hardy ferns in British gardens usually produce their spores from June onwards. When the spore cases are ripe they will appear light brown and often show the colour of the spores inside - *Polypodium* = yellow, *Athyrium* = black, etc. Another indication that the spore cases are ready is that the protective scale, the indusium, will have withered or completely disappeared to give the spore cases room to dehisce. A hand lens, preferably with a 20x magnification, is useful for checking the condition of the spore cases on the frond. Remember, if the spore cases have a ragged appearance and/or if there is lack of spore colour, the spores have probably already dehisced.

In most cases two or three pinnae will provide an ample quantity to sow. Simply place the pinnae in a paper envelope and keep it somewhere warm and dry for a day or two. Never use polythene bags as any trapped moisture will delay or even prevent the spore cases dehiscing. After a day or so give the envelope a few flicks with a finger to ensure that the spore cases have opened and that a dusty deposit, including the spores, is in the bottom of the envelope. The pinnae themselves can be discarded. If there are no spores then the pinnae were either picked too late, and the spores have gone, or too soon.



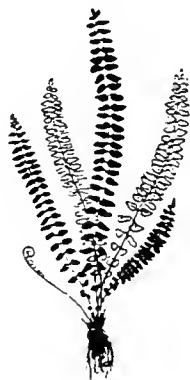
## 1991 Northwest Horticultural Society Fern Festival

As in the past, the Northwest Horticultural Society's annual Fern Festival will consist of a lecture, garden tour, plant display and fern sale. This year's speaker will be Paul Martin Brown, a knowledgeable and enthusiastic teacher, lecturer and naturalist. He will speak on "Ferns in Their Haunts", an enticing look at some of the best fern sectors of the country. His lecture will be at the Center for Urban Horticulture in Seattle at 7:30 P.M. on May 30. It promises to be an entertaining and educational evening. The festival will continue with a garden tour at the home of Mrs. Hugh Baird, 8928 N.E. 33rd Pl., Bellevue, from 10:00 A.M. until Noon on Friday, May 31. This beautiful garden features ferns, rhododendrons (especially) and alpine....be sure to see the *Ceterach!* The fern sale itself will take place at the Center from 7:00 P.M. on May 30; 1:00 P.M. to 5:00 P.M. May 31, and 10:00 A.M. to 2:00 P.M. June 1.



## Birmingham Fern Society Fiesta

The Birmingham, Alabama Fern Society will have a show sale and lecture in mid-June. We were unable to reach the chairwoman at press time, but further information is available from Ginny Lusk, 131 Auburn Rd., Pelham, AL 35124. (205) 988-0299.



## Barbara Joe Hoshizaki to Speak in Seattle

"A Fern Anthology" is the title of the lecture by Barbara Hoshizaki to be given at and sponsored by The Center for Urban Horticulture on May 8 at 7:30 P.M. Barbara is one of our scientific advisors and those of us who heard her wonderful lecture last year remember it as one of our best, full of insight and information presented with warmth and charm. Bring your notebook, questions, and a friend.

## Propagating Hint from Barbara Hoshizaki

Have a pan of prothallia that refuses to yield sporophytes in spite of frequent misting? Gently flood the culture with warm water and let it soak for several days, then carefully pour the water off and watch for that new growth.

## Volunteers Needed

Planting, grooming, collecting spore, typing.... How would you like to help? Donate your time and skills to the HFF and help us keep our expenses down. To help, please call or drop a note to our volunteer co-ordinator: Betty Coe; 2821 Second Avenue, #902; Seattle, WA 98121. Phone: 728-5928.

*Hardy Fern Foundation*

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